

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on March 23, 2010, and the references cited therewith.

Claims 1, 9, 10, 11, 18, 23, and 24 are amended. Support for the amendment of these claims may be found in the Specification at least at FIG. 2, 3, 4a, 4b, 6a, 6b, and 7, and para. 0041-0045 and 0066-0071. The amendment adds no new matter.

Claims 1-13, 18, 21-24, 32, and 33 are now pending in this application.

35 USC § 103 Rejection of the Claims

Claim 1 was rejected under 35 U.S.C. § 103(a). The Examiner argues that this claim is obvious over Kim (U.S. Publication No. 2001/0021051) in view of Comerford (U.S. Patent No. 4,592,057) and further in view of Chun et al. (U.S. Patent No. 6,294,933).

Claim 1 has been amended to recite that the conversion of the digital voltage sequence comprises using a buffered level shifter circuit to shift an input voltage of a modulation circuit to a first voltage level to generate a current of the modulation mode, and to shift the input voltage of the modulation circuit to a second voltage level to generate a current of the bias mode. Kim may disclose converting a digital voltage sequence to a first current signal having an adjustable bias mode and a separately adjustable modulation mode; Comerford may disclose a modulation mode controlled by a modulation control circuit and a bias mode controlled by a separate bias control circuit. Neither of these references, however, discloses or suggests using a buffered level shifter circuit to shift an input voltage of a modulation circuit to a first voltage level to generate a current of the modulation mode, and to shift the input voltage of the modulation circuit to a second voltage level to generate a current of the bias mode. Nor are these features disclosed or suggested by any of the other cited. For at least this reason, therefore, claim 1 as amended is not rendered obvious by the cited references, whether considered alone or in any reasonable combination.

The Examiner has also rejected claims 2-8, arguing that these claims are also obvious in view of the cited art. These claims depend from claim 1 as amended, and therefore include all features thereof. Given that claim 1 as amended includes features that are neither disclosed nor suggested by any of the cited references, none of claims 2-8 is obvious over these references, whether considered alone or in any reasonable combination.

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim (U.S. Publication No. 2001/0021051) in view of Comerford (U.S. Patent No. 4,592,057). This claim has been amended to recite that the laser driver comprises a buffered level shifter circuit configured to shift an input voltage of a modulation circuit to a first voltage level to generate a current of the modulation mode, and to shift the input voltage of the modulation circuit to a second voltage level to generate a current of the bias mode. While Bosch may disclose a level

shifting stage that ensures that voltage levels of quantized signals are at the proper level, this reference does not disclose or suggest a buffered level shifter circuit configured to shift an input voltage of a modulation circuit to a first voltage level to generate a current of the modulation mode, and to shift the input voltage of the modulation circuit to a second voltage level to generate a current of the bias mode. Nor are these features disclosed or suggested by any of the other cited art. For at least this reason, therefore, claim 9 as amended is not rendered obvious by the cited references, whether considered alone or in any reasonable combination.

Claims 10-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over various combinations of the cited references. These claims depend from claim 9 as amended, and therefore include all features thereof. As discussed above, claim 9 as amended includes features that are neither disclosed nor suggested by any of the cited art. Each of claims 10-13 therefore includes features that are neither disclosed nor suggested by the cited art. Therefore, none of claims 10-13 is rendered obvious over the cited references, whether these references are considered alone or in any reasonable combination.

Claims 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim (U.S. Publication No. 2001/0021051) in view of Bartur et al. (U.S. Publication No. 2002/0027689). This claim has been amended to recite that the first transimpedance amplifier comprises three stage pairs, where each pair comprises two inverter amplifiers, and where the two inverter amplifiers of the second stage pair are resistively cross coupled. While Kim may disclose a transimpedance amplifier circuit that converts a current signal to a differential voltage signal, Kim fails to disclose or suggest a transimpedance amplifier that comprises three stage pairs, where each pair comprises two inverter amplifiers, and where the two inverter amplifiers of the second stage pair are resistively cross coupled. Nor are these features disclosed or suggested by any of the other cited references. For at least these reasons, therefore, claim 18 as amended is not rendered obvious by any of the identified references, whether considered alone or in any reasonable combination.

Claims 21-22 depend from claim 18 as amended, and include all features thereof. Given that claim 18 as amended includes features that are neither disclosed nor suggested by the cited art, each of claims 21 and 22 includes features that are neither disclosed nor suggested by the

cited references. For at least these reasons, therefore, neither of claims 21 and 22 is obvious over the cited references, whether considered alone or in any reasonable combination.

Claim 23 has also been rejected by the Examiner, who argues that this claim is unpatentable over Kim (U.S. Publication No. 2001/0021051) in view of Comerford (U.S. Patent No. 4,592,057) in view of Chun et al. (U.S. Patent No. 6,294,933). Claim 23 has been amended to recite that the laser driver comprises a buffered level shifter circuit configured to shift an input voltage of a modulation circuit to a first voltage level to generate a current of the modulation mode, and to shift the input voltage of the modulation circuit to a second voltage level to generate a current of the bias mode. As discussed above, these features are neither disclosed nor suggested by the cited art. Therefore, claim 23 as amended is not obvious over any of the cited references, whether considered alone or in any reasonable combination.

The Examiner has also rejected claims 24, 32, and 33 over various combinations of the cited art. These claims depend from claim 23 as amended, and therefore include all features thereof. Given that claim 23 as amended includes features that are neither disclosed nor suggested by any of the cited references, each of claims 24, 32, and 33 includes features that are neither disclosed nor suggested by the cited art. For at least this reason, therefore, none of claims 24, 32, and 33 is obvious over the cited references, whether considered alone or in any reasonable combination.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (301) 421-1449 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-4259.

Respectfully submitted,

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